

Application No. 09/411,212

AMENDMENT TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for processing multiple structured images using an imaging input device with a smart platen so as to reduce occurrence of image orphans due to the bleeding of edges of-in scanning multiple digital images arranged upon the smart platen ~~by determining the boundaries of each of the multiple digital images~~, comprising:
 - arranging multiple objects upon the imaging input device with a smart platen for scanning;
 - scanning the multiple objects with the imaging input device with a smart platen so as to produce an input image;
 - generating ~~bin-linked~~ lists with greater than three edge ~~points-pixels~~ therein for the input image data produced in the scanning step;
 - ~~detecting-generating~~ a boundary of a first structured image from the linked bin-lists;
 - ~~detecting-generating~~ a boundary of a second structured image from the linked bin-lists;
 - identifying a first bounding box for the first structured image from its generated boundary;
 - identifying a second bounding box for the second structured image from its generated boundary;
 - determining whether an overlap exists between the ~~detected boundaries~~ identified bounding boxes of the first structured image and second structured image; ~~images~~;

Application No. 09/411,212

merging the first structured image and the second structured image for a third structured image when an overlap of bounding boxes is determined;
and,

modeling a ~~third~~ new bounding box image for the third structured image from the merging of the calculated overlap of the first and second structured images wherein the ~~third new bounding box image~~ contains the orphaned at least said first and second structured images and represents a depiction of the orphaned said first and second structured images without an overlap between said first and second images.

2. (Currently Amended) The method according to claim 1, comprising:

wherein the step of determining an overlap of the first and second bounding boxes images uses a maximum threshold value in at least an X-axial direction for the first and second images.

3. (Currently Amended) The method according to claim 1, comprising:

wherein the step of determining an overlap of the first and second bounding boxes images uses a minimum threshold value in at least an X-axial direction for the first and second bounding boxes images.

Application No. 09/411,212

4. (Currently Amended) The method according claim 1, comprising:
wherein the step of determining an overlap of the first and second bounding boxes images further comprises:

determining a maximum threshold value in at least an X-axial direction
for the first and second bounding boxes images,

determining a minimum threshold value in at least an X-axial direction
for the first and second bounding boxes images, and

comparing the maximum and minimum values of the first and second
bounding boxes images in a manner so as to ascertain an overlap between the
first and second bounding boxes images.

5. (Currently Amended) The method according to claim 4, comprising:

wherein the step of comparing includes further at least determining if a
minimum threshold value in the X-axial direction of the first bounding box image
is greater than a maximum threshold value in the X-axial direction of the
second bounding box image.

6. (Currently Amended) The method according to claim 4, comprising:

wherein the step of comparing includes further at least determining if a
maximum threshold value in the X-axial direction of the first bounding box image
is greater than a minimum threshold value in the X-axial direction of the
second bounding box image.

7. (Cancelled)

Application No. 09/411,212

8. (Currently Amended) The method according to claim 1, comprising:

wherein the step of determining an overlap of the first and second bounding boxes ~~images~~ further comprises:

comparing a maximum value in the y-axial direction of the first bounding box ~~image~~ with a minimum value in the y-axial direction of the second bounding box ~~image~~, and

comparing a minimum value in the y-axial direction of the first bounding box ~~image~~ with a maximum value in the y-axial direction of the second bounding box ~~image~~.

Application No. 09/411,212

9. (Currently Amended) A method for processing multiple structured images using an imaging input device with a smart platen so as to reduce occurrence of image orphans due to the bleeding of contour edges of multiple digital images arranged upon the smart platen by generating an object defined by contour edges of particular sets of the multiple digital images, comprising:

arranging multiple objects upon the imaging input device with a smart platen for scanning;

scanning the multiple objects with the imaging input device with a smart platen so as to produce an input image;

generating ~~bin-linked~~ lists with greater than three edge points therein for the input image data produced in the scanning step;

detecting a set of edges of a first object from the linked lists~~bin-list~~;

detecting a set of edges of a second object from the linked lists~~bin-list~~;

identifying a first bounding box for the first object from its detected set of edges;

identifying a second bounding box for the second object from its detected set of edges;

determining an overlap between the ~~detected set of edges~~identified first and second bounding boxes of the first and second objects;

calculating the overlap between the ~~set of edges~~first and second bounding boxes of the first and second objects; and,

modeling a third object by ascertaining the calculated overlap of the first and second ~~objects~~bounding boxes wherein the third object contains at least said first and second objects when the calculated overlap ascertains that they are orphaned~~without an overlap of the set of edges of the first and second objects.~~

Application No. 09/411,212

10. (Currently Amended) The method according to claim 9, comprising:

wherein the step of determining an overlap of the first and second bounding boxes ~~objects~~—uses a maximum threshold value in a horizontal direction of the set of edges of the first and second bounding boxes~~objects~~.

11. (Currently Amended) The method according to claim 9, comprising:
wherein the step of determining an overlap of the first and second bounding boxes ~~objects~~—uses a minimum threshold value in a horizontal direction of the set of edges of the first and second bounding boxes~~objects~~.

12. (Currently Amended) The method according claim 9, comprising:
wherein the step of determining an overlap of the set of edges of the first and second bounding boxes ~~objects~~—further comprises:
determining a maximum threshold value in at least a horizontal direction of the set of edges of the first and second bounding boxes~~objects~~,
determining a minimum threshold value in at least a horizontal direction of the set of edges of the first and second bounding boxes~~objects~~, and
comparing the maximum and minimum values of the set of edges of the first and second bounding boxes ~~objects~~—in a manner so as to determine if there is an overlap of the set of edges between the first and second bounding boxes~~objects~~.

13. (Currently Amended) The method according to claim 12, comprising:

wherein the step of comparing includes further at least determining if a minimum threshold value in the horizontal axial direction of a particular edge of the first bounding box ~~object~~—is greater than a maximum threshold value in the horizontal direction of a particular edge of the second bounding box~~object~~.

Application No. 09/411,212

14. (Currently Amended) The method according to claim 12, comprising:

wherein the step of comparing includes further at least determining if a maximum threshold value in the horizontal direction of a particular edge of the first bounding box ~~object~~ is greater than a minimum threshold value in the horizontal direction of a particular edge of the second bounding box ~~object~~.

15. (Cancelled)

16. (Currently Amended) The method according to claim 9, comprising:

wherein the step of determining an overlap of set of edges of the first and second bounding boxes ~~objects~~ further comprises:

comparing a maximum value in the vertical direction of the set of edges of the first bounding box ~~object~~ with a minimum value in the vertical direction of the set of edges of the second bounding box ~~object~~, and

comparing a minimum value in the vertical direction of the set of edges of the first bounding box ~~object~~ with a maximum value in the vertical direction of the set of edges of the second bounding box ~~object~~.